

What is claimed is:

1. Polishing slurry for texturing a surface of a magnetic hard disk substrate,
5 said polishing slurry comprising:

abrading particles with diameters in the range of 1-10nm, selected from the group consisting of monocrystalline diamond particles, polycrystalline diamond particles and cluster particles comprising monocrystalline and polycrystalline diamond particles; and

10 a dispersant for said abrading particles selected from the group consisting of water and water-based aqueous solutions.

2. The polishing slurry of claim 1 wherein said abrading particles further include coagulated cluster particles inside said dispersant, said coagulated cluster particles being coagulated particles of said cluster particles.

15

3. The polishing slurry of claim 1 containing said abrading particles in an amount of 0.01 weight % or greater with respect to the total of said polishing slurry.

4. The polishing slurry of claim 1 containing said abrading particles in an
20 amount of 0.01-3 weight % with respect to the total of said polishing slurry.

5. The polishing slurry of claim 1 containing said abrading particles in an amount of 0.01-1 weight % with respect to the total of said polishing slurry.

25 6. The polishing slurry of claim 2 containing said abrading particles in an amount of 0.01-1 weight % with respect to the total of said polishing slurry.

7. The polishing slurry of claim 1 wherein said water-based aqueous solution is an aqueous solution having an additive added to water, said additive being of one or
30 more material selected from the group consisting of non-ionic surfactants, organic

phosphoric acid esters, higher fatty acid amides, glycol compounds, higher fatty acid salts, and anionic surfactants.

8. The polishing slurry of claim 9 wherein said additive is contained in an
5 amount of 1-10 weight % with respect to the total of said polishing slurry.

9. A method of texturing a surface of a magnetic hard disk substrate, said method comprising the steps of:

rotating said magnetic hard disk substrate;

10 supplying polishing slurry on said surface; and

pressing a polishing tape on said surface and running said polishing tape;

wherein said polishing slurry comprises:

abrading particles with diameters in the range of 1-10nm, selected from the group consisting of monocrystalline diamond particles, polycrystalline diamond particles and
15 cluster particles comprising monocrystalline and polycrystalline diamond particles; and

a dispersant for said abrading particles selected from the group consisting of water and water-based aqueous solutions.

10. The method of claim 9 wherein said polishing tape is of a material
20 selected from the group consisting of woven cloth, unwoven cloth, flocked cloth, raised cloth and foamed materials.

11. The method of claim 10 wherein said woven cloth, said unwoven cloth and said raised cloth comprise microfibers.

25

12. The method of claim 10 wherein said flocked cloth has microfibers that are planted and said raised cloth has microfibers that are raised.

13. The method of claim 11 wherein said microfibers have a width in the
30 range of 0.1-5 μ m.

14. The method of claim 12 wherein said microfibers have a width in the range of 0.1-5 μ m.

15. The method of claim 10 wherein said foamed material has a surface with
5 indentations formed by air bubbles, said indentations have diameters in the range of 0.1-5 μ m.